



# **Review of Infection Control Procedures**

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DENTAC Infection Control  
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# GOALS

- Fulfill requirements for initial training and licensure
- Review infection control procedures to aid understanding and compliance

# TODAY'S TOPICS

- Hand Hygiene
- Infection Control in the Laboratory
- Personal Protective Equipment
- Respiratory Etiquette
- Handling of Sharps and Biohazards
- Post Exposure Guidelines/OSHA's Bloodborne Pathogens Standard
- Sterilization
- Hepatitis B vaccination
- Dental Water Line Maintenance

# Hand Hygiene

## Includes

- Hand Washing
- Antiseptic Hand Rub
- Surgical Hand Antisepsis



- Hand Hygiene is considered the single most critical measure for reducing the risk of organism transfer from operator to patient.
- Noncompliance has been a major contributor to outbreaks.
- Noncompliance aids spread of multiresistant organisms.

**The preferred method  
for hand hygiene  
depends on the type of  
procedure, the degree  
of contamination, and  
the desired  
persistence of  
antimicrobial action on  
the skin... CDC 2003**

# Antimicrobial Soaps





# Indications

- Before and after each patient
- After a trip to the latrine
- Immediately following contamination with blood or OPIM
- After removal of gloves
- After sneezing, wiping nose, etc
- Before and after eating
- At the end of each workday



# OPIM

- Human body fluids
- Saliva
- Any body fluid visibly contaminated with blood

# Handwashing Procedure

- Remove all jewelry, check for cuts or abrasions
- Lather hands and forearms, if needed, for a minimum of 30-60 seconds
- Rinse towards your elbows
- Dry hand first, then forearms, with disposable paper towel and then use that towel to turn off faucet.

# Alcohol-based Hand Rub



# Prevacare ®

- Acceptable method of hand hygiene between non surgical procedures as long as gloves are intact
- Excellent for use in areas of high patient volume and low contact; Example: exam rooms, radiology.
- Aides in handwashing compliance

# Prevacare®

## DISADVANTAGES

- Cannot be used when hands are visibly dirty or contaminated.
- Flammable
- Possible “gritty” feeling on hands when used with powdered gloves or from emollient “build up” after repeated use
- May be more expensive than traditional hand-hygiene agents

# Directions for Use

- Alcohol-Based Hand Rubs **MUST** be used properly for maximum effectiveness.
- Thoroughly wet hands with Prevacare
- Allow to air dry
- Kills organisms in 15 seco



# Infection Control in the Dental Laboratory





- The DENTAC follows a “Clean Lab” policy
  - Remove all PPE
  - Disinfect all prosthesis PRIOR to entering to entering the Lab

# Disinfection of Laboratory Materials



# Impression Material

- Rinse impression with water
- Can use dental stone sprinkle or antibacterial soap to remove bioburden
- Put Impression in plastic bag
- Spray with Dispatch (contact time 1 minute)
- Put impression in clean plastic bag to take to laboratory

# Prosthesis and Intra-Treatment Appliances

- Scrub with soap and water
- Disinfect with “Dispatch”
- Allow proper contact time, do not overexpose
- Rinse with water
- Turn in to Lab



# Severely Contaminated Prosthesis

- Place in plastic bag with stone or plaster remover
- Place in Ultrasonic for 10 minutes
- Follow routine decontamination procedures

# Personal Protective Equipment



# PPE

- PPE is designed to protect the skin and the mucous membranes of the eyes, nose, and mouth of dental health-care personnel (DHCP) from exposure to infectious or potentially infectious materials
- Primary PPE used in oral health-care settings includes gloves, surgical masks, protective eyewear, face shields, and protective clothing



# GLOVES

- Should be worn when blood, OPIM, mucous-membranes or non-intact skin may be contacted
- New gloves should be used for each patient
- Gloves should never be worn out of the bay or operatory
- Gloves should never be worn into the dental lab

# GLOVES

- May not be reused
- May not be washed or disinfected
- No petroleum-based hand lotions with latex gloves
- Grasp at wrist and strip off “inside-out”
- May be placed in regular waste container

# UTILITY GLOVES

- Should fit properly
- Used for cleaning instruments, surfaces, handling laundry, or housekeeping
- After washing with soap, pull off by finger tips
- May be washed, autoclaved, or disinfected and reused as long as integrity is not compromised
- May be placed in regular waste container when no longer usable

# Masks, Eye Protection and Face Shields

- Masks should be worn in combination with glasses with solid side shields.
- A new mask should be used for each patient or at least every hour.
- Prescription glasses may be worn in conjunction with side shields or goggles.
- Face shields must be worn in conjunction with appropriate safety glasses to protect from projectiles.

# Protective Gowns

- Scrubs are not “Protective Gowns”
- To be worn during surgical procedures when splatter is anticipated
- Should be removed when entering “cleans areas” such as offices, clean area of sterilization, break rooms, waiting areas, dental lab or outside.
- May be worn in hallways between bays

# Protective Gowns cont...

- Needs to be changed (or disposed) when visibly soiled.
- May not be laundered at home.
- Enlisted must display their name and rank.
- Officers must display their name and title/rank.
- Civilians must display their name.

# Respiratory Etiquette





Stop the spread of germs that make you and others sick!

# Cover your Cough



You may be asked to put on a surgical mask to protect others.

## Clean your Hands

after coughing or sneezing.



Wash with soap and water or clean with alcohol-based hand cleaner.



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1600 University Avenue, SE  
St. Paul, MN 55104  
651.201.6000



Minnesota  
State Office of the  
Attorney General  
600 North Third Street  
St. Paul, MN 55101  
651.224.2600



# Cover Your Cough!

- CDC guidelines to decrease the spread of airborne illnesses such as influenza, RSV, whooping cough and SARS.
- Pertains mostly to our waiting room areas.

# Steps to Respiratory Etiquette

- Post “Cover you Cough” Signs in waiting area.
- Make available tissue, wastebasket, and alcohol-based hand rub (or sink area with soap and water)
- Ask patients that present with respiratory symptoms to wear a mask.
- Follow universal precautions when treating (Ex: rubber dam isolation)

# Contaminated Sharps and Other Biohazard Management



# Sharps Management

- Burs should be removed from handpiece after last use
- Use one handed “scoop” or recapping device for recapping needles.
- Needles should not be passed to or recapped by auxiliary personnel.
- Contaminated sharps should not be bent ( with the exception of ortho wire, endo files, needles used during endo procedures, and certain anesthetic techniques.

# Sharps Management cont....

- Disposable contaminated sharps should be placed in appropriate containers as soon as possible.
- Auxiliary personnel should not pass or wipe clean endodontic files.
- Remove instruments from ultrasonics by lifting basket; **Do not reach into ultrasonics by hand to retrieve instruments.**

# Sharps Management cont...

- Utility gloves are **mandatory** when processing dental instruments..



# Disposing of Sharps

- Contaminated needles and disposable sharps must be placed in containers designed for their disposal.
- Containers must be:
  - Closable
  - Disposable
  - Puncture-resistant
  - Leak-proof
  - Colored Red
  - Labeled as Biohazard



# BIOHAZARD LABEL



- Symbol accompanied by word *BIOHAZARD*
- Must be fluorescent orange or orange/red with lettering and symbols in contrasting colors
- Red or orange/red bags or containers may substitute for labels
- Decontaminated regulated waste does not need to be labeled or placed in red bags

# BIOHAZARD LABEL

- Sharps container
- Regulated waste container
- Contaminated laundry bags
- Refrigerators/freezers containing blood or saliva
- Containers used to ship blood/OPIM
- Contaminated equipment

# Management of Contaminated and Soiled Laundry

- Should be placed in bins provided.
- Bins should be covered and labeled as biohazards.
- Personnel should not take soiled laundry home.
- When handling, gloves should be worn.

# OSHA's BBP Standard and Post Exposure Gu



# OSHA BLOODBORNE PATHOGENS STANDARD

- Protects employees
  - Dentists
  - Hygienists
  - Lab technicians
  - Assistants
- Any individual who may have occupational exposure to bloodborne pathogens (BBPs)

# BBPs STANDARD

- Employer responsibilities
  - Explain the content
  - Ensure all staff members have access to copy of the regulatory text
  - May want to consider giving each member a copy



# OCCUPATIONAL EXPOSURE

- Reasonably anticipated skin, eye, mucous membrane, or puncture wound (parenteral) contact with blood or other potentially infectious materials (OPIM) that may result from the performance of the DHCWs duties

# OCCUPATIONAL EXPOSURE TASKS

- Dental setting
  - Performing dental procedures
  - Handling or pouring impressions
  - Taking radiographs
  - Cleaning and sterilizing instruments
  - Handling trash or waste

# UNIVERSAL PRECAUTIONS

- Treat all human blood/OPIM as if infected with HBV/HIV
- Single most important measure to control transmission
- Blood and saliva are considered potentially infectious materials
  - Can cause contamination to items/surfaces

# WORK PRACTICE REQUIREMENTS

- No eating, drinking, smoking, applying cosmetics or handling contact lenses in areas where there is occupational exposure
- No storage of food/drinks in refrigerators, cabinets, shelves or counter tops where blood/OPIM are present

# WORK PRACTICE REQUIREMENTS

- Store, transport or ship blood/OPIM materials (extracted teeth, tissues, contaminated impressions) in containers that are closed, prevent leakage, colored red or labeled with biohazard sign

# HOUSEKEEPING

- Employer must ensure clean/sanitary workplace
- Work surfaces, equipment, and other reusable items must be decontaminated upon completion of procedure when contaminated with blood/OPIM
- Barriers protecting surfaces/equipment must be replaced when contaminated or at end of the workshift

# HOUSEKEEPING

- Reusable receptacles (bins, pails, cans)
  - Must be inspected/decontaminated on a regular basis and when visibly soiled
- Broken glass that may be contaminated
  - May be cleaned up with brush/tongs
  - Never picked up with hands, even if gloves are worn
- Contaminated equipment must be decontaminated prior to servicing or labeled as biohazard



# REGULATED WASTE

- Liquid or semi-liquid blood or OPIM
- Items contaminated with blood/OPIM that would release these substances in a liquid or semi-liquid state if squeezed
- Items that are caked with dried blood/OPIM and capable of releasing these materials during handling
- Contaminated sharps
- Pathological /microbiological waste containing blood/OPIM



# EXPOSURE INCIDENT

- Specific eye, mouth, other mucous membrane, non-intact skin or parenteral contact with blood/OPIM that results from performance duties
- Employer
  - Responsible for establishing procedure for evaluating exposure incident
  - Thorough assessment and confidentiality are critical

# EXPOSURE CONTROL PLAN

- Must be written
- Must be accessible to all DHCWs
- Must be updated at least annually
  - Or when alterations in procedures create new occupational hazards
- Copies available upon request

# EXPOSURE CONTROL PLAN

- KEY ELEMENTS
  - Identification of job classifications/tasks where there is exposure to blood/OPIM
  - Schedule of how/when provisions of standard will be implemented
  - Methods of communicating hazards to DHCWs
  - Need for Hepatitis B vaccination
  - Post-exposure evaluation and follow-up

# EXPOSURE CONTROL PLAN

- KEY ELEMENTS
  - Recordkeeping/compliance methods
    - Engineering/work practice controls
    - Personal protective equipment (PPE)
    - Housekeeping
  - Procedures for evaluating an exposure incident

# Sharps Injuries

- Percutaneous injury or OPIM exposure
- CDC estimates 385,000 needlestick injuries per year by hospital-based healthcare personnel.
- That is 1,000 injuries per day.
- Underreporting is a problem.

# HIV and Needlesticks

- The first case of HIV transmission from a patient to a healthcare worker was reported in 1986. Through December, 2001, CDC had received voluntary reports of 57 documented and 138 possible episodes of HIV transmission to healthcare personnel in the United States <http://www.cdc.gov/ncidod/hip/BLOOD/hivpersonnel.htm> /).



# HIV and Needlesticks

- In prospective studies of healthcare personnel, the average risk of HIV transmission after a percutaneous exposure is estimated to be approximately 0.3% (10).
- This number is for ALL healthcare personnel.

# HBV and Needlesticks

- Numbers have decreased dramatically in the last twenty years due to immunizations.
- Without postexposure prophylaxis, there is a 6%-30% risk that an exposed, susceptible healthcare worker will become infected with the HBV.

# HCV and Needlesticks

- The precise number of healthcare personnel who acquire HCV occupationally is not known. Healthcare personnel exposed to blood in the workplace represent 2% to 4% of the total new HCV infections occurring annually in the United States .
- There is no way to confirm that these are occupational transmissions.
- Prospective studies show that the average risk of HCV transmission following percutaneous exposure to an HCV-positive source is 1.8%

# What do you do?



**If you experienced a  
needlestick or sharps  
injury or were exposed  
to the blood or other  
body fluid of a patient  
during the course of  
your work,  
immediately follow  
these steps:**

# Wash the Area of Exposure

- Wash needlesticks and cuts with soap and water.
- Flush splashes to the nose, mouth, or skin with water.
- Irrigate eyes with clean water, saline, or sterile irrigants.

# Report

- Report the incident immediately to your supervisor, NCOIC, or Infection Control Officer.



# Paperwork

- The supervisor will initiate necessary paperwork
  - Form 4106
  - CA-16 (Civilians)
  - CA-1 (Civilians

# Treatment

- Immediately following incident, the exposed individual will report to the WBAMC Emergency room.
- Make staff aware at desk that you have had a “Sharps Injury”

# Occupational Health

- Following evaluation and treatment at WBAMC ER, the exposed individual will be referred to Occupational Health for follow-up procedures.
- Case will remain open by DENTAC Risk Manager until 6 month follow-up.

# What about the Source?

- If the source of contamination is known, the supervisor will ask the patient to accompany the healthcare worker to the ER.
- If the patient is no longer present, but known, the supervisor will contact the patient.
- If the source is already known to be positive for a bloodborne pathogen, testing for that source individual need not be repeated

# STERILIZATION



# STERILIZATION

- The process by which all forms of life within an environment are totally destroyed, including viruses and spores. Heat sterilization can be monitored and verified. The sterilization by high-level disinfectant solutions cannot be easily monitored or verified.

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# PROCEDURES

- Minimize scrubbing of instruments by using ultrasonic units or large capacity washers.
- Do NOT reach into ultrasonic units to retrieve instruments.
- Steam sterilization is used for sterilization.
- Sterilizers are tested for efficacy weekly using spore testing.

# **STERILIZED INSTRUMENTS**

- All are labeled with Julian numbers.
- Expiration is event specific.



# **HEPATITIS B VACCINATION**

- The hepatitis B vaccine is mandatory for all military personnel.
- It is required for civilians hired after 1 Jan 1997 with occupational exposure.
- It is strongly recommended for civilians hired before 1 Jan 1997 with occupational exposure.
- It is provided without charge to all civilian employees and volunteers who may have occupational exposure.

# **DENTAL UNIT WATER LINE MAINTENANCE**

- You will be trained on your clinic's dental unit water line treatment protocol.
- DUWL will be treated weekly with a specified cleaner.
- Dental chairs will be randomly tested for water quality.

# In Conclusion,



- **Good infection control practices:**
  - Decrease the spread of illness.
  - Help to control multiresistant organisms
  - Keep the clinical environment safe.
  - Reduce the number of incidents.

# Protect you!



# Protect your patient!





- Please complete the “Initial Infection Control Training” form.
- Provide the form to your respective clinic Infection Control Officer.

# Questions?

- DIRECT ANY QUESTIONS TO:  
**CPT Mok**, DENTAC Infection Control Officer,  
Dental Clinic #3 Infection Control Officer  
**CPT Gillespie**, Infection Control Officer,  
Hospital Dental Clinic  
**COL Forte**, Infection Control Advisor to the  
Great Plains Region

# RESOURCES

- Exposure Control Plan, USA DENTAC, Ft Bliss, TX revised OCT 2003
- <http://www.brooks.af.mil/dis/3QTR04/incontrolfactsheet9.htm>
- <http://www.cdc.gov/niosh/homepage.html>
- [http://www.cdc.gov/sharpssafety/wk\\_overview.html#overViewIntro](http://www.cdc.gov/sharpssafety/wk_overview.html#overViewIntro)
- OSHA Bloodborne pathogens. - 1910.1030
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